

**Product Name:** (S)-3,4-DCPG

**Catalog No.:** 1302

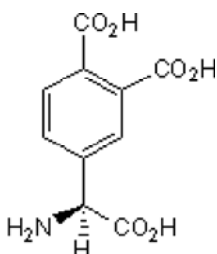
**Batch No.:** 10

CAS Number: 201730-11-2

IUPAC Name: (S)-3,4-Dicarboxyphenylglycine

**1. PHYSICAL AND CHEMICAL PROPERTIES**

**Batch Molecular Formula:** C<sub>10</sub>H<sub>9</sub>NO<sub>6</sub>.H<sub>2</sub>O  
**Batch Molecular Weight:** 257.2  
**Physical Appearance:** White solid  
**Solubility:** water to 100 mM  
 phosphate buffered saline to 100 mM  
 1eq. NaOH to 100 mM  
 1eq. HCl to 100 mM  
**Storage:** Desiccate at RT  
**Batch Molecular Structure:**



**2. ANALYTICAL DATA**

**TLC:** R<sub>f</sub> = 0.35 (Pyridine:Acetic acid:Water:Butanol [3:8:11:22])  
**HPLC:** Shows 98.8% purity  
**Chiral HPLC:** Shows >98.8% purity  
<sup>1</sup>H NMR: Consistent with structure  
**Mass Spectrum:** Consistent with structure  
**Optical Rotation:** [α]<sub>D</sub> = +120.4 (Concentration = 0.5, Solvent = 6N HCl)

**Microanalysis:**

	Carbon	Hydrogen	Nitrogen
Theoretical	46.7	4.31	5.45
Found	46.95	4.13	5.4

Caution - Not Fully Tested • Research Use Only • Not For Human or Veterinary Use

**bio-techne.com**

info@bio-techne.com

techsupport@bio-techne.com

**North America**

Tel: (800) 343 7475

**China**

info.cn@bio-techne.com

Tel: +86 (21) 52380373

**Europe Middle East Africa**

Tel: +44 (0)1235 529449

**Rest of World**

www.tocris.com/distributors

Tel:+1 612 379 2956

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IUPAC Name: (S)-3,4-Dicarboxyphenylglycine

**Description:**

Potent, selective mGlu<sub>8a</sub> agonist (EC<sub>50</sub> = 31 nM). Displays > 100-fold selectivity over mGlu<sub>1-7</sub> and displays little or no activity at NMDA and kainate receptors. Increases c-Fos expression in stress-related brain areas following systemic administration in mice in vivo. Also potent anticonvulsant in mice in vivo. Caged (S)-3,4-DCPG, Racemate and R-enantiomer also available.

**Physical and Chemical Properties:**

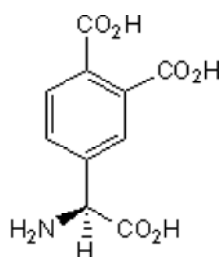
Batch Molecular Formula: C<sub>10</sub>H<sub>9</sub>NO<sub>6</sub>·H<sub>2</sub>O

Batch Molecular Weight: 257.2

Physical Appearance: White solid

**Minimum Purity:** >98%

**Batch Molecular Structure:**



**References:**

**Linden et al** (2003) Systemic administration of the potent mGlu8 receptor agonist (S)-3,4-DCPG induces c-Fos in stress-related brain regions in wild-type, but not mGlu8 receptor knockout mice. *Neuropharmacology* **45** 473. PMID: 12907308.

**Moldrich et al** (2001) Anticonvulsant activity of 3,4-dicarboxyphenylglycines in DBA/2 mice. *Neuropharmacology* **40** 732. PMID: 11311902.

**Thomas et al** (2001) (S)-3,4-DCPG, a potent and selective mGlu8a receptor agonist activates metabotropic glutamate receptors on primary afferent terminals in the neonatal rat spinal cord. *Neuropharmacology* **40** 311. PMID: 11166323.

**Thomas et al** (1997) Dicarboxyphenylglycines antagonize AMPA- but not kainate-induced depolarizations in neonatal rat motoneurons. *Eur.J.Pharmacol.* **338** 111. PMID: 9455991.

**Storage:** Desiccate at RT

**Solubility & Usage Info:**

water to 100 mM

phosphate buffered saline to 100 mM

1eq. NaOH to 100 mM

1eq. HCl to 100 mM

CAUTION - Analysis shows that this material rapidly decomposes when dissolved in alkaline solution. Therefore we recommend that this product is dissolved in water.

**Stability and Solubility Advice:**

Some solutions can be difficult to obtain and can be encouraged by rapid stirring, sonication or gentle warming (in a 45-60°C water bath).

Information concerning product stability, particularly in solution, has rarely been reported and in most cases we can only offer a general guide. Our standard recommendations are:

**SOLIDS:** Provided storage is as stated on the product label and the vial is kept tightly sealed, the product can be stored for up to 6 months from date of receipt.

**SOLUTIONS:** We recommend that stock solutions, once prepared, are stored aliquoted in tightly sealed vials at -20°C or below and used within 1 month. Wherever possible solutions should be made up and used on the same day.

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